

RAW SEQUENCE LISTING **10/531659**

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/531,659
Source: PC/10
Date Processed by STIC: 4/26/05

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:29

Input Set : A:\PTO.YF.txt

Output Set : N:\CRF4\04262005\J531659.raw

3 <110> APPLICANT: InterCell AG
 5 <120> TITLE OF INVENTION: Nucleic acids coding for adhesion factors of group B streptococcus,
 6 adhesion factors of group B streptococcus and further uses thereof
 8 <130> FILE REFERENCE: I 10003 PCT
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/531,659
 C--> 10 <141> CURRENT FILING DATE: 2005-04-15
 10 <160> NUMBER OF SEQ ID NOS: 258
 12 <170> SOFTWARE: PatentIn version 3.1
 14 <210> SEQ ID NO: 1
 15 <211> LENGTH: 1329
 16 <212> TYPE: DNA
 17 <213> ORGANISM: Streptococcus agalactiae
 19 <400> SEQUENCE: 1

20	ttgttcaata aaatagggtt tagaacttgg aaatcaggaa agctttggct ttatatggga	60
22	gtgctaggat caactattat tttaggatca agtcctgtat ctgctatgga tagtggtgga	120
24	aatcaaagtc agggcaatgt tttagagcgt cgtcaacgtg atgcagaaaa cagaagccaa	180
26	ggcaatgttc tagagcgtcg tcaacgcgat gttgagaata agagccaagg caatgtttta	240
28	gagcgtcgtc aacgtgatgc ggaaaacaag agccaaggca atgttttaga gcgtcgtcaa	300
30	cgtgatgcag aaaacagaag ccaaggcaat gttctagagc gtcgtcaacg tgatgcagaa	360
32	aacagaagcc aaggcaatgt tctagagcgt cgtcaacgcg atgcagaaaa cagaagccaa	420
34	ggtaatgttc tagagcgtcg tcaacgtgat gcagaaaaca gaagccaagg taatgttcta	480
36	gagcgtcgtc aacgtgatgc agaaaacaga agccaaggta atgttctaga gcgtcgtcaa	540
38	cgcgatgttg agaataagag ccaaggcaat gtttttagagc gtcgtcaacg tgatgcggaa	600
40	aacaagagcc aaggcaatgt tttagagcgt cgtcaacgtg atgcagaaaa cagaagccaa	660
42	ggcaatgttt tagagcgtcg tcaacgtgat gcagaaaaca gaagccaagg caatgttcta	720
44	gagcgtcgtc aacgtgatgc agaaaacaga agccaaggca atgttctaga gcgtcgtcaa	780
46	cgtgatgcag aaaacagaag ccaaggcaat gttctagagc gtcgtcaacg cgatgcagaa	840
48	aacagaagcc aaggtaatgt tctagagcgt cgtcaacgtg atgcagaaaa cagaagccaa	900
50	ggcaatgttt tagagcgtcg tcaacgtgat gcagaaaaca gaagccaagg caatgtttta	960
52	gagcgtcgtc aacgtgatgc agaaaacaga agccaaggca atgttttaga gcgtcgtcaa	1020
54	cgtgatgcgg aaaacaagag ccaagtaggt caacttatag ggaaaaatcc acttctttca	1080
56	aagtcaatta tatctagaga aaataatcac tcgagtcaag gtgactctaa caaacagtca	1140
58	ttctctaaaa aagtatctca ggttactaat gtagctaata gaccgatgtt aactaataat	1200
60	tctagaacaa tttcagtgat aaataaatta cctaaaacag gtgatgatca aaatgtcatt	1260
62	tttaaacttg taggttttgg tttaattttg ttaacaagtc gctgcggttt gagacgcaat	1320
64	gaaaattaa	1329
67	<210> SEQ ID NO: 2	
68	<211> LENGTH: 1233	
69	<212> TYPE: DNA	
70	<213> ORGANISM: Streptococcus agalactiae	
72	<400> SEQUENCE: 2	
73	ttgttcaata aaatagggtt tagaacttgg aaatcaggaa agctttggct ttatatggga	60
75	gtgctaggat caactattat tttaggatca agttctgtat ctgctatgga tagtggtgga	120

RAW SEQUENCE LISTING

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:30

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\04262005\J531659.raw

```

77 aatcaaagtc agggcaatgt tttagagcgt cgtcaacgcg atgcagaaaa cagaagccaa 180
79 ggcaatgttt tagagcgtcg tcaacgtgat gcagaaaaca gaagccaagg caatgtttta 240
81 gagcgtcgtc aacgtgatgc agaaaacaga agccaaggta atgttctaga gcgtcgtaa 300
83 cgcgatgttg aaaataaaag ccaaggcaat gttttagagc gtcgtcaacg tgatgcagaa 360
85 aacagaagcc aaggtaatgt tctagagcgt cgtcaacgcg atgttgaaaa taaaagccaa 420
87 ggcaatgttt tagagcgtcg tcaacgtgat gcagaaaaca gaagccaagg taatgttcta 480
89 gagcgtcgtc aacgtgatgc agaaaacaga agccaaggca atgtttttaga gcgtcgtaa 540
91 cgcgatgcag aaaacagaag ccaaggcaat gttctagagc gtcgtcaacg tgatgctgaa 600
93 aacaaaagcc aaggcaatgt tttagagcgt cgtcaacgtg atgcagaaaa cagaagccaa 660
95 ggcaatgttt tagagcgtcg tcaacgtgat gctgaaaaca gaagccaagg caatgtttta 720
97 gagcgtcgtc aacgcgatgc agaaaacaga agccaaggta atgttctaga gcgtcgtaa 780
99 cgtgatgcgg aaaacaagag ccaaggcaat gttttagagc gtcgtcaacg tgatgcagaa 840
101 aacagaagcc aaggcaatgt tttagagcgt cgtcaacgcg atgttgagaa taagagccaa 900
103 ggcaatgttt tagagcgtcg tcaacgtgat gcggaaaaca agagccaagt aggtcaactt 960
105 atagggaaaa atccacttct tcaaaagtca attatatcta gagaaaataa tcaacttagt 1020
107 caaggtgact ctaacaaaca gtcattctct aaaaaagtat cttaggttac taatgtagct 1080
109 aatagaccga tgttaactaa taattctaga acaatttcag tgataaataa attacctaaa 1140
111 acaggtgatg atcaaaatgt cattttttaa cttgtagggt ttggtttaat tttgttaaca 1200
113 agtcgctgcg gtttgagacg caatgaaaat taa 1233

```

116 <210> SEQ ID NO: 3

117 <211> LENGTH: 1041

118 <212> TYPE: DNA

119 <213> ORGANISM: Streptococcus agalactiae

121 <400> SEQUENCE: 3

```

122 ttgttcaata aaataggttt tagaacttgg aaatcaggaa agctttggct ttatatggga 60
124 gtgctaggat caactattat tttaggatca agtcctgtat ctgctatgga tagtgttgga 120
126 aatcaaagtc aaggtaatgt tctagagcgt cgtcaacgtg atgctgataa caagagccaa 180
128 ggcaatgttc tagaacgtcg tcaacgcgat gtagaaaaca gaagccaagg caatgttcta 240
130 gagcgtcgtc aacgcgatgc ggataacaag agccaaggca atgtttttaga gcgccgccaa 300
132 cgcgatgcag aaaacaaaag tcagggcaat gttctagaac gtcgtcaacg tgatgttgag 360
134 aataagagcc aaggcaatgt tctagagcgt cgccaacgtg atgcagaaaa caaaagtcag 420
136 ggtaatgttc tagagcgtcg tcaacgcgat gcagataaca agagccaagg taatgttcta 480
138 gaacgtcgtc aacgcgatgt ggaaaacaaa agtcagggca atgttctaga acgtcgtaa 540
140 cgtgatgttg agaataagag ccaaggcaat gttctagagc gtcgccaacg tgatgcagaa 600
142 aacaaaagtc aaggtaatgt tctagagcgt cgtcaacgcg atgcagataa caagagccaa 660
144 ggtaatgttc tagaacgtcg tcaacgcgat gtggaaaaca aaagtcaggg caatgttcta 720
146 gagcgtcgcc aacgtgatgt tgagaacaag agccaagtag gtcaacttat agggaaaaat 780
148 ccacttcttt caaagtcac tatatctaga gaaaataatc actctagtca aggtgactct 840
150 aacaaacagt cattctctaa aaaagtatct caggttacta atgtagctaa tagaccaatg 900
152 ttaactaata attctagaac aatttcagt ataaataaat tacctaaaac aggtgatgat 960
154 caaaatgtca tttttaaaact tgtaggtttt ggtttaattt tgtaacaag tcgctgcggt 1020
156 ttgagacgca atgaaaatta a 1041

```

159 <210> SEQ ID NO: 4

160 <211> LENGTH: 561

161 <212> TYPE: DNA

162 <213> ORGANISM: Streptococcus agalactiae

164 <400> SEQUENCE: 4

```

165 ttgttcaata aaataggttt tagaacttgg aaatcaggaa agctttggct ttatatggga 60
167 gtgctaggat caactattat tttaggatca agtcctgtat ctgctatgga tagtgttgga 120

```

RAW SEQUENCE LISTING

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:30

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\04262005\J531659.raw

```

169 aatcaaagtc agggcaatgt tttagagcgt cgtcaacgcg atgcagaaaa cagaagccaa 180
171 ggtaatgttc tagagcgctc tcaacgcgat gcagaaaaca gaagccaagg taatgttcta 240
173 gagcgctcgc aacgtgatgc ggaaaacaag agccaagtag gtcaacttat agggaaaaat 300
175 ccacttcttt caaagtcaat tatactaga gaaaataatc actctagtca aggtgactct 360
177 aacaaacagt cattctctaa aaaagtatct caggttacta atgtagctaa tagaccgatg 420
179 ttaactaata attctagaac aatttcagtg ataaataaat tacctaaaac aggtgatgat 480
181 caaaatgtca tttttaaaact tgtaggtttt ggtttaattt tgttaacaag tcgctgcggt 540
183 ttgagacgca atgaaaatta a 561
186 <210> SEQ ID NO: 5
187 <211> LENGTH: 897
188 <212> TYPE: DNA
189 <213> ORGANISM: Streptococcus agalactiae
191 <400> SEQUENCE: 5
192 ttgttcaata aaatagggtt tagaacttgg aaatcaggaa agctttggct ttatatggga 60
194 gtgctaggat caactattat tttaggatca agtcctgtat ctgctatgga tagtggtgga 120
196 aatcaaagcc aaggcaatgt tctagagcgt cgtcaacgcg atgcagaaaa cagaagccaa 180
198 ggtaatgttt tagaacgtcg tcaacgcgat gttgagaaca agagccaagg taatgtttta 240
200 gagcgctcgcc aacgtgatgc ggaaaacaaa agtcagggca atgttttaga gcgctcgtcaa 300
202 cgtgatgcag aaaacagaag ccaaggtaat gttctagagc gtcgtcaacg cgatgttgag 360
204 aataagagcc aaggcaatgt tctagagcgt cgtcaacgcg atgttgagaa taagagccaa 420
206 ggtaatgttc tagagcgctc tcaacgcgat gttgagaata agagccaagg taatgttcta 480
208 gagcgctcgc aacgtgatgc ggaaaacaag agccaaggca atgttctaga gcgctcgtcaa 540
210 cgcgatgcag aaaacagaag ccaaggtaat gttttagagc gtcgccaaaca tgatgttgag 600
212 aataagagtc aagtaggtca acttataggg aaaaatccac ttttttcaaa gtcaactgta 660
214 tctagagaaa ataactactc tagtcaaggt gactctaaca aacagtcatt ctctaaaaaa 720
216 gtatctcagg ttactaatgt agctaataga ccgatgttaa ctaataattc tagaacaatt 780
218 tcagtgataa ataaattacc taaaacaggt gatgatcaaa atgtcatttt taaacttgta 840
220 ggttttggtt taattttatt aacaagtctc tgcggtttga gacgcaatga aaattaa 897
223 <210> SEQ ID NO: 6
224 <211> LENGTH: 1857
225 <212> TYPE: DNA
226 <213> ORGANISM: Streptococcus agalactiae
228 <400> SEQUENCE: 6
229 ttgttcaata aaatagggtt tagaacttgg aaatcaggaa agctttggct ttatatggga 60
231 gtgctaggat caactattat tttaggatca agtcctgtat ctgctatgga tagtggtgga 120
233 aatcaaagtc aaggtaatgt tctagagcgt cgccaacgtg atgcgataa caagagccaa 180
235 ggtaatgttt tagagcgctc ccaacgtgat gcagataaca aaagtcaggg caatgttcta 240
237 gaacgtcgcc aacgtgatgt tgataacaag agccaaggta acgttctaga gcgtcgccaa 300
239 cgcgatgctg ataacaagag ccaaggtaat gttttagagc gccgccaacg cgatgcagat 360
241 aacaaaagtc aaggtaatgt tctagagcgt cgccaacgcg atgttgataa caagagccag 420
243 ggtaatgttt tagagcgctc ccaacgcgat gcagataaca aaagtcaggg taatgtttta 480
245 gagcgctcgcc aacgcgatgt tgataacaaa agccaaggta atgttttaga gcgtcgccaa 540
247 cgtgatgctg ataacaaaag tcagggcaat gttctagagc gtcgccaacg tgatgcggat 600
249 aacaaaagcc aaggtaatgt tctagagcgt cgccaacgcg atgcgataa caaaagtcag 660
251 ggcaatgttt tagagcgctc ccaacgtgat gctgataaca aaagtcaggg taatgttcta 720
253 gagcgctcgcc aacgcgatgc agataacaaa agccaaggta atgttctaga gcgtcgccaa 780
255 cgcgatgctg ataacaaaag tcaaggtaat gttctagagc gtcgccaacg tgatgctgat 840
257 aacaagagcc aaggcaatgt tcttgagcgt cgtcaacgcg atgtcgataa caaaagtcag 900
259 ggtaatgttt tagagcgctc ccaacgtgat gcggataaca agagtcaggg taatgtttta 960

```

RAW SEQUENCE LISTING

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:30

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\04262005\J531659.raw

```

261 gagcgtcgcc aacgcgatgc ggataacaag agccaaggta atgttttaga gcgtcgccaa 1020
263 cgcgatgcgg ataacaagag tcaaggtaat gttttagagc gtcgccaacg cgatgcggat 1080
265 aacaagagcc aaggtaatgt tttagagcgt cgccaacgcg atgcagataa caaaagtcaa 1140
267 ggtaatgttt tagagcgtcg ccaacgcgat gctgataaca agagccaagg taatgtttta 1200
269 gagcgtcgtc aacgtgatgc agataacaaa agtcagggca atgttttaga gcgtcgtaaa 1260
271 cgtgatgcgg ataacaagag ccaaggtaat gttttagagc gtcgccaacg tgatgcggat 1320
273 aacaagagcc agggcaatgt tctagaacgt cgtcaacgtg atgcggataa caagagccaa 1380
275 ggtaacgttt tagagcgtcg ccaacgtgat gcggataaca agagccaggg caatgtttta 1440
277 gagcgccgcc aacgcgatgc agataacaaa agtcaaggta atgttttaga gcgtcgccaa 1500
279 cgcgatgcag ataacaagag ccagggtaat gttctagagc gtcgccaacg cgatgcggaa 1560
281 aacaaaagtc aagtaggtca acttataggg aaaaatccac ttttttcaa gtcaactgta 1620
283 tctagagaaa ataactactc tagtcaaggt gactctaaca aacagtcatt ctctaaaaaa 1680
285 atatctcagg ttactaatgt agctaattga ccgatgttaa ctaataattc tagaacaatt 1740
287 tcagtataaa ataaattacc taaaacaggt gatgatcaaa atgtcatttt taaacttgta 1800
289 ggttttggtt taattttggt aacaagtctc tgcggtttga gacgcaatga aaattaa 1857
292 <210> SEQ ID NO: 7
293 <211> LENGTH: 2706
294 <212> TYPE: DNA
295 <213> ORGANISM: Streptococcus agalactiae
297 <400> SEQUENCE: 7
298 atgagaaaaa accaaaaatt ttctaaaaata ttgacgttaa gtcttttttg tttgtcgcaa 60
300 ataccgctta ataccaatgt tttaggggaa agtaccgtac cggaaaatgg tgctaaagga 120
302 aagttagtgt ttaaaaagac agatgaccag aacaaaccac tttcaaaagc tacctttggt 180
304 ttaaaaacta ctgctcatcc agaaagtaaa atagaaaaag taactgctga gctaacagggt 240
306 gaagctactt ttgataatct catacctgga gattatactt tatcagaaga aacagcgccc 300
308 gaaggttata aaaagactaa ccagacttgg caagttaagg ttgagagtaa tggaaaaact 360
310 acgatacaaa atagtgggtga taaaaattcc acaattggac aaaatcacga agaactagat 420
312 aagcagtatc cccccacagg aatttatgaa gatacaaagg aatcttataa acttgagcat 480
314 gttaaagggt cagttccaaa tggaaagtca gaggcaaaag cagttaaccc atattcaagt 540
316 gaagggtgagc atataagaga aattccagag ggaacattat ctaaacgtat ttcagaagta 600
318 ggtgatttag ctcataataa atataaaatt gagttaactg tcagtggaaa aaccatagta 660
320 aaaccagtgg acaaacaaaa gccgttagat gttgtcttcg tactcgataa ttctaactca 720
322 atgaataacg atggcccaaa ttttcaaagg cataataaag ccaagaaagc tgccgaagct 780
324 cttgggaccg cagtaaaaga tatttttagga gcaaacagtg ataatagggt tgcattagtt 840
326 acctatggtt cagatatttt tgatggtagg agtgtagatg tcgtaaaagg atttaagaa 900
328 gatgataaat attatggcct tcaaactaag ttcacaattc agacagagaa ttatagtcatt 960
330 aaacaattaa caaataatgc tgaagagatt ataaaaagga ttcttacaga agctcctaga 1020
332 gctaaatggg gatcaactac aaacggactt actccagagc aacaaaagca gtactatctt 1080
334 agtaaagtag gggaaacatt tactatgaaa gccttcatgg aggcagatga tattttgagt 1140
336 caagtagatc gaaatagtca aaaaattatt gttcatataa ctgatggtgt tccaacaaga 1200
338 tcatatgcta ttaataattt taaattgggt gcatcatatg aaagccaatt tgaacaaatg 1260
340 aaaaaaaatg gatattctaa taaaagtaat tttctactta ctgataagcc cgaggatata 1320
342 aaaggaaatg gggagagtta ctttttggtt cccttagata gttatcaaac acagataatc 1380
344 tctggaaact tacaaaaact tcattattta gatttaaatt ttaattaccc taaagggtaca 1440
346 atttatcgaa atggaccagt aagagaacat ggaacaccaa ccaaacttta tataaatagt 1500
348 ttaaaacaga aaaattatga catctttaat tttggtatag atatatctgc ttttagacaa 1560
350 gtttataatg aggattataa gaaaaatcaa gatggtactt ttcaaaaatt gaaagaggaa 1620
352 gcttttgaac tttcagatgg ggaaataaca gaactaatga agtcattctc ttctaacct 1680
354 gagtattata ccccgatagt aacttcatcc gatgcatcta acaatgaaat tttatctaaa 1740

```

RAW SEQUENCE LISTING

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:30

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\04262005\J531659.raw

```

356 attcagcaac aatttgaaaa gggttttaaca aaagaaaact caattgttaa tgggaactata 1800
358 gaagatccta tgggtgacaa aatcaattta cagcttggca acggacaaac attgcaacca 1860
360 agtgattata ctttacaggg aaatgatgga agtataatga aagatagcat tgcaactggg 1920
362 gggcctaata atgatgggtg aatacttaaa ggggttaaat tagaatacat caaaaataaa 1980
364 ctctacgtta gaggtttgaa cttaggggag ggacaaaaag taacactcac atatgatgtg 2040
366 aaactagatg acagttttat aagtaacaaa ttctatgaca ctaatggtag aacaacattg 2100
368 aatcctaaat cagaggatcc taatacactt agagattttc caatccctaa aattcgtgat 2160
370 gtgagagaat atcctacaat aacgattaaa aacgagaaga agttagggtga aattgaattt 2220
372 acaaaagttg ataaagataa taataagttg cttctcaaag gagctacgtt tgaacttcaa 2280
374 gaatttaatg aagattataa actttattta ccaataaaaa ataataattc aaaagtagtg 2340
376 acggggagaaa acggcaaaat ttcttacaaa gatttgaaag atggcaaata tcagttaata 2400
378 gaagcagttt cgccgaagga ttatcaaaaa attactaata aaccaatttt aacttttgaa 2460
380 gttgttaaag gatcgatata aaatataata gctgttaata aacagatttc tgaatatcat 2520
382 gaggaaggtg acaagcattt aattaccaac acgcatattc caccaaaagg aattattccg 2580
384 atgacaggtg ggaaaggaat tctatctttc attttaatat gtggatctat gatgtctatt 2640
386 gcaggtggaa tttatatttg gaaaagatat aagaaatcta gtgatataatc tagagaaaaa 2700
388 gattaa 2706

```

391 <210> SEQ ID NO: 8

392 <211> LENGTH: 2025

393 <212> TYPE: DNA

394 <213> ORGANISM: Streptococcus agalactiae

396 <400> SEQUENCE: 8

```

397 atgaaaaaaaa tcaacaaatg tcttacagtg ttctcgacac tgctattgat cttaacgtca 60
399 ctattctcag ttgcaccagc gtttgccgac gacgtaacaa ctgatactgt gaccttgcac 120
401 aagattgtca tgccacaagc tgcatttgat aactttactg aaggtaacaa aggtagaagt 180
403 gatagcgatt atgttggtta acaaattaat gaccttaaat cttatttttg ctcaaccgat 240
405 gctaaagaaa ttaaggggtg tttctttgtt ttcaaaaatg aaactggtac aaaattcatt 300
407 actgaaaatg gtaaggaagt cgatactttg gaagctaaag atgctgaagg tgggtgctgtt 360
409 ctttcagggt taacaaaaga cactgggttt gcttttaaca ctgctaagtt aaaaggaact 420
411 taccaaatcg ttgaattgaa agaaaaatca aactacgata acaacggttc tatcttggct 480
413 gattcaaaag cagttccagt taaaatcact ctgccatttg taaacaacca aggtgttggt 540
415 aaagatgctc acatttatcc aaagaatact gaaacaaaac cacaagtaga taagaacttt 600
417 gcagataaag atcttgatta tactgacaac cgaaaagaca aagggtgttg ctcagcgaca 660
419 gttggtgaca aaaaagaata catagttgga acaaaaattc ttaaaggctc agactataag 720
421 aaactggttt ggactgatag catgactaaa ggtttgacgt tcaacaacaa cgttaaagta 780
423 acattggatg gtaaagattt tctgtttta aactacaaac tcgtaacaga tgaccaaggt 840
425 ttccgtcttg ccttgaatgc aacaggtctt gcagcagtag cagctgctgc aaaagacaaa 900
427 gatgttgaaa tcaagatcac ttactcagct acggtgaacg gctccactac tgttgaagtt 960
429 ccagaaacca atgatgttaa attggactat ggtataaacc caacggaaga aagtgaacca 1020
431 caagaaggta ctccagctaa ccaagaaatt aaagtcatta aagactgggc agtagatggt 1080
433 acaattactg atgttaatgt tgcagttaaa gctatcttta ccttgcaaga aaaacaaacg 1140
435 gatggtacat ggggtgaacgt tgcttcacac gaagcaacaa aaccatcacg ctttgaacat 1200
437 actttcacag gtttgataa tactaaaact taccgcgttg tcgaacgtgt tagcggctac 1260
439 actccagaat atgtatcatt taaaaatggt gttgtgacta tcaagaacaa caaaaactca 1320
441 aatgatccaa ctccaatcaa cccatcagaa ccaaaagtgg tgacttatgg acgtaaattt 1380
443 gtgaaaacaa atcaagctaa cactgaacgc ttggcaggag ctaccttctt tgtaagaaa 1440
445 gaaggaaaat acttggcacg taaagcaggt gcagcaactg ctgaagcaaa ggcagctgta 1500
447 aaaactgcta aactagcatt ggatgaagct gttaaagctt ataacgactt gactaaagaa 1560
449 aaacaagaag gccaaagagg taaaacagca ttggctactg ttgatcaaaa aaaaaagct 1620

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/531,659

DATE: 04/26/2005
TIME: 15:50:31

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\04262005\J531659.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:222; Xaa Pos. 2,5,8,9,10,11,12,13,14,15,16

VERIFICATION SUMMARY

DATE: 04/26/2005

PATENT APPLICATION: US/10/531,659

TIME: 15:50:31

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\04262005\J531659.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:3926 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:222 after pos.:0